Amendments to the Claims

Please cancel Claim 2 without prejudice to or disclaimer of the subject matter recited therein.

Please amend Claims 1, 6 and 7 to read as follows.

1. (Currently amended) A printing method for conducting printing on a printing medium using a printing head in which a plurality of printing elements are arranged in a column direction, the printing being performed by scanning the printing head in a raster direction, the method comprising:

an allocating step of using an A × B matrix created by combining a plurality of different M × N dot arrangements in both the raster and column directions as a minimum unit, the dot arrangements corresponding to the same level of input image data quantized into multivalued levels, and allocating the dot arrangements in the matrix to the input image data; and

a printing step of forming dots on the printing medium on the basis of the dot arrangements of the matrix allocated to the input image data,

~~wherein, in the matrix,~~ wherein A kinds of dot arrangements are arranged for each raster corresponding to the input image data, a repetition sequence of the A kinds of dot arrangements in the raster direction is the same for every raster, and the dot arrangement corresponding to a starting position of the repetition sequence is different in every raster.

Claim 2 (cancelled)

3. (Previously presented) A printing method according to claim 1, wherein the matrix is repeatedly used in the raster direction and in the column direction, and the dot arrangements in the matrix are allocated to the input image data.

4. (Previously presented) A printing method according to claim 1, wherein the matrix is a matrix of 4 × 4 created by combining four dot arrangements in the raster direction and in the column direction, the dimensions of the dot arrangements are set to 1/600 inch × 1/600 inch, and the diameter of each dot formed on the printing medium is set to 30 μm.

5. (Previously presented) A printing method according to claim 1, wherein the printing head is a head capable of ejecting ink and each printing element has an ejection opening for ejecting the ink.

6. (Currently amended) A printing apparatus for conducting printing on a printing medium using a printing head in which a plurality of printing elements are arranged in a column direction, the printing being performed by scanning the printing head in a raster direction, the apparatus comprising:

allocating means for using an A × B matrix created by combining a plurality of different M × N dot arrangements in both the raster and column directions as a

minimum unit, the dot arrangements corresponding to the same level of input image data quantized into multivalued levels, and allocating the dot arrangements in the matrix to the input image data; and

printing control means for forming dots on the printing medium on the basis of the dot arrangements of the matrix allocated to the input image data,

~~wherein, in the matrix,~~ wherein A kinds of dot arrangements are arranged for each raster corresponding to the input image data, a repetition sequence of the A kinds of dot arrangements in the raster direction is the same for every raster, and the dot arrangement corresponding to a starting position of the repetition sequence is different in every raster.

7. (Currently amended) A program for conducting printing on a printing medium using a printing head in which a plurality of printing elements are arranged in a column direction, the printing being performed by scanning the printing head in a raster direction, the program allowing a computer to execute:

an allocating step of using an A × B matrix created by combining a plurality of different M × N dot arrangements in both the raster and column directions as a minimum unit, the dot arrangements corresponding to the same level of input image data quantized into multivalued levels, and allocating the dot arrangements in the matrix to the input image data; and

a printing step of forming dots on the printing medium on the basis of the dot arrangements of the matrix allocated to the input image data,

~~wherein, in the matrix,~~ wherein A kinds of dot arrangements are arranged for each raster corresponding to the input image data, a repetition sequence of the A kinds of dot arrangements in the raster direction is the same for every raster, and the dot arrangement corresponding to a starting position of the repetition sequence is different in every raster.

8. (Previously presented) A storage medium storing the program according to claim 7 and capable of being read by a computer.